

**Notice of Allowability**

Application No.

10/005,759

Examiner

Michael Heck

Applicant(s)

MILLER ET AL.

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3623

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the request for continued examination filed 30 January 2004.
2. ☒ The allowed claim(s) is/are 51-54, 57, 59, 60, 62, 63, 65-70, 72, 73 and 76-81.
3. ☒ The drawings filed on 07 December 2001 and 18 December 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☒ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08),  
Paper No./Mail Date \_\_\_\_\_
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_

  
**TARIQ R. HAPIZ**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 3600**

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### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with David D. Nelson. Reg. No. 47,818 on 1 April 2004 and 17 November 2004. The application has been amended as follows:

The application has been amended as follows:

On page 5 of the specification, lines 5-6, insert after "comprises the managing"  
of.

The claims have been amended as follows:

Claim 51. A computerized process for accelerating improvement to a more mature software product, the method comprising:

a) a step for managing, on a computer, an organization developing said product, said step for managing an organizational comprising:  
a step for managing ~~on a computer~~ personnel of said organization  
including a step for designing a performance measurement infrastructure, a step for  
executing organization design and development, and a step for designing and  
deploying training, and

a step for implementing ~~on a computer~~ a product improvement process as needed to create include steps for creating, planning, organizing, and maintaining a Software Engineering Process Group (SEPG), and steps for managing and improving the organization's processes to include controlling SEPG project work, rolling out and supporting SEPG projects, completing the SEPG project, and controlling process improvement;

b) a step for managing<sub>1</sub> on a computer<sub>1</sub> a project for development of said product; and

c) a step for managing<sub>1</sub> on a computer<sub>1</sub> delivery of said product, said computerized step for managing delivery of the product comprising:

a ~~computerized~~ step for analyzing the product;

a ~~computerized~~ step for designing the product, said designing step occurring after commencement of said analyzing step;

a ~~computerized~~ step for building and testing the product, said building and testing step occurring after commencement of said designing step, said building and testing step ~~comprising~~ includes a step for building and testing the technology infrastructure, a step for building and testing an application, and a step for planning and executing product and acceptance tests; and

a ~~computerized~~ step for deploying the product, said deploying step occurring after commencement of said building and testing step;

whereby the step for managing the organization, the step for managing project development<sub>1</sub>, and the step for managing delivery occur concurrently, and whereby

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61 results from the step for managing the organization are used to modify the step for managing project development and the step for managing delivery, and results from the step for managing project development and results from the step for managing delivery are used to modify the step for managing the organization.

Claim ~~53~~<sup>3</sup>. The method of claim ~~52~~<sup>2</sup>, wherein said step for managing a program for implementing comprises:

- 82
- a computerized-step for justifying the program;
  - a computerized-step for planning execution of the program;
  - a computerized-step for organizing program resources;
  - a computerized step for controlling program work; and
  - a computerized-step for completing the program.

Claim 55. Cancelled ✓

Claim 56. Cancelled ✓

Claim ~~57~~<sup>5</sup>. The method of claim ~~51~~<sup>1</sup>, wherein the step for managing a project includes:

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- a computerized-step for planning of execution of the project;
  - a computerized-step for organizing project resources;
  - a computerized-step for controlling project work; and
  - a computerized-step for completing the project.
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Claim ~~58~~<sup>6</sup>. The method of claim ~~54~~<sup>1</sup>, wherein the step for analyzing the product comprises:

- a ~~computerized~~ step for defining a business case;
- a ~~computerized~~ step for gathering and analyzing requirements;
- a ~~computerized~~ step for assessing deployment environment; and
- a ~~computerized~~ step for identifying and analyzing application and interface requirements.

AB Claim ~~60~~<sup>7</sup>. The method of claim ~~54~~<sup>1</sup>, wherein the ~~step for~~ a step for designing the product comprises:

- (i) a ~~computerized~~ step for designing technology infrastructure, including
  - a ~~computerized~~ step for identifying and analyzing technology infrastructure requirements,
  - a ~~computerized~~ step for selecting and designing execution/operation hardware, and
  - a ~~computerized~~ step for selecting and designing a development architecture; and
- (ii) a ~~computerized~~ step for designing an application, including
  - a ~~computerized~~ step for designing an application architecture,
  - a ~~computerized~~ step for designing a database,
  - a ~~computerized~~ step for planning a testing approach, and

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a ~~computerized~~ step for designing a performance support approach,

whereby said steps for designing an application architecture, designing a database, planning a testing approach, and designing a performance support approach are performed in parallel.

Claim ~~62~~<sup>8</sup>. The method of claim ~~51~~<sup>1</sup>, wherein the step for building and testing the technology infrastructure comprises:

~~computerized~~ acquiring of physical environment assets and services;  
~~computerized~~ building and testing of execution/operations architecture;

and

~~computerized~~ building and testing of development architecture.

Claim ~~63~~<sup>9</sup>. The method of claim ~~51~~<sup>1</sup>, wherein the step for building and testing the application comprises:

~~computerized~~ deployment planning of the application;  
~~computerized~~ performing of the application;  
~~computerized~~ detailed designing of the application;  
~~computerized~~ building and testing of the application;  
~~computerized~~ developing policies and procedures; and  
~~computerized~~ developing learning products related to the application.

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Claim ~~65~~<sup>10</sup>. The method of claim ~~54~~, wherein the step for deploying the product comprises:

a ~~computerized~~ step for transitioning users and deploying policies and procedures;

a ~~computerized~~ step for deploying a physical environment;

a ~~computerized~~ step for deploying an application;

a ~~computerized~~ step for deploying a technology infrastructure; and

a ~~computerized~~ step for activating and testing a solution.

Claim ~~66~~<sup>11</sup>. A computerized process for accelerating improvement to a more mature software product, the method comprising the steps of:

a) managing, on a computer, an organization developing said product, said managing of the organizational ~~comprising~~ includes computerized managing personnel of said organization and ~~computerized~~ the implementing of a product improvement process, wherein the managing and implementing are performed in parallel,

the managing the personnel of the said organization ~~comprising~~ computer directed includes designing a performance measurement infrastructure, ~~computer directed~~ executing organization design and development after commencement of the performance measure designing, and ~~computer directed~~ designing and deploying training after commencement of the executing, and

the implementing of a product improvement process ~~comprising~~ includes parallel steps of (i) ~~computerized~~ creating, planning, and organizing, and

maintaining a Software Engineering Process Group (SEPG) and (ii) ~~computerized~~ managing and improving the organization's processes, wherein the managing and improving the organization's processes ~~comprising computer-directed~~ includes controlling SEPG project work, ~~computer-directed~~ rolling out and supporting SEPG projects after commencement of the project work controlling, ~~computer-directed~~ completing the SEPG project after commencement of the rolling out and supporting, and ~~computer-directed~~ controlling of process improvement after commencement of the completing;

103 b) ~~computerized~~ managing, on a computer, a project for development of said product, wherein said project managing includes ~~computer-directed~~ planning of execution of the project, ~~computer-directed~~ organizing project resources after commencement of the execution planning, ~~computer-directed~~ controlling project work after commencement of the project resources organization, and, ~~computer-directed~~ completion of the project after commencement of the project work controlling; and

c) ~~computerized~~ managing, on a computer, delivery of said product, the managing of product delivery comprising:

~~computer-directed~~ analyzing of the product;

~~computer-directed~~ designing of the product, said designing occurring after commencement of said analyzing;

~~computer-directed~~ building and testing of the product, said building and testing occurring after commencement of said designing, said building and testing ~~comprising computer-directed~~ includes building and testing of the technology

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infrastructure, ~~computer-directed~~ building and testing of an application, and ~~computer~~  
~~directed~~ planning and executing of product and acceptance tests; and

deploying the product, said deploying occurring after  
commencement of said building and testing;

whereby the managing the organization, the managing development[[:]], and the  
managing delivery are performed concurrently.

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Claim ~~67~~. The method of claim ~~66~~ further comprising computer directed managing of  
a program for implementing said managing the organization, managing development of  
said product[[:]], and managing delivery of said product, wherein said step of managing  
an implementation program comprises the sequentially performed steps of:

~~Computer-directed~~ justifying the program;

~~Computer-directed~~ planning execution of the program after  
commencing said justifying;

~~Computer-directed~~ organizing program resources after  
commencing said planning;

~~Computer-directed~~ controlling program work after commencing said  
organization; and

~~Computer-directed~~ completing the program after commencing said  
controlling.

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Claim ~~68~~. The method of claim ~~66~~, wherein the managing delivery of the product  
comprises sequentially performed steps of:

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~~computer-directed~~ analyzing the product;

~~computer-directed~~ designing the product commencing after said  
analyzing[.];

~~computer-directed~~ building and testing the product commencing  
after said designing[.]; and

~~computer-directed~~ deploying the product commencing after said  
building and testing.

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Claim ~~60~~. A program storage device readable by a machine, tangibly embodying  
a program of instructions executable by a machine to perform the method steps  
comprising:

a) a step for managing, on a computer, an organization  
developing said product, said step for managing an organization comprising:

a step for managing personnel of said organization  
including a step for designing a performance measurement infrastructure, a step for  
executing organization design and development, and a step for designing and  
deploying training, and

a step for implementing a product improvement process as  
needed to create include steps for creating, planning, organizing, and maintaining a  
Software Engineering Process Group (SEPG), and steps for managing and improving  
the organization's processes to include controlling SEPG project work, rolling out and  
supporting SEPG projects, completing the SEPG project, and controlling process  
improvement;

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b) a step for managing, on a computer, a project for development of said product; and

c) a step for managing, on a computer, delivery of said product, said computerized step for managing delivery of the product comprising:

a step for analyzing the product;

a step for designing the product, said designing step occurring after commencement of said analyzing step;

03 a step for building and testing the product, said building and testing step occurring after commencement of said designing step, said building and testing step ~~comprising~~ includes a step for building and testing the technology infrastructure, a step for building and testing an application, and a step for planning and executing product and acceptance tests; and

a step for deploying the product, said deploying step occurring after commencement of said building and testing step[[:]].

Claim 74. Cancelled ✓

Claim 75. Cancelled ✓

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Claim 78. The program storage device of claim 69, wherein the step for ~~a step for~~ designing the product comprises:

D4 (i) a step for designing technology infrastructure, including

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a step for identifying and analyzing technology infrastructure requirements,

a step for selecting and designing execution/operation hardware, and

a step for selecting and designing a development architecture; and

(ii) a step for designing an application, including

a step for designing an application architecture,

a step for designing a database,

a step for planning a testing approach, and

a step for designing a performance support approach[[:]].

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Claim 80. The program storage device of claim 69, wherein the step for building and testing the application comprises:

deployment planning of the application;

performing of the application[[:]];

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detailed designing of the application;

building and testing of the application;

developing policies and procedures; and

developing learning products related to the application[[:]].

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Heck whose telephone number is (703) 305-8215. The examiner can normally be reached Monday thru Friday between the hours of 8:00am - 4:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq R. Hafiz can be reached on (703) 305-9643. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

Any response to this action should be mailed to:

**Director of the United States Patent and Trademark Office  
P.O. Box 1450  
Alexandria, Virginia 22313-1450**

Or faxed to:

**(703) 872-9306** [Official communications; including After Final communications labeled "**Box AF**"]

**(703) 746-9419** [Informal/Draft communication, labeled "**PROPOSED**" or "**DRAFT**"]

Hand delivered responses should be brought to 220 South 20<sup>th</sup> Street, Crystal Plaza Two, Lobby, Room 1B03, Arlington, Virginia 22202.

mch  
17 November 2004



### REASONS FOR ALLOWANCE

1. Claims 51-54, 57, 59, 60, 62, 63, 65-70, 72, 73, and 76-81 are allowed.
2. The following is an examiner's statement of reasons for allowance:

The present invention of claim 51 and claim 69 disclose a method and program storage device for accelerating improvement to a more mature software product. The closest prior art, McFeeley (McFeeley, IDEALsm: A User's Guide for Software Process Improvement, Software Engineering Institute, Carnegie Melon University, Pittsburgh, Pennsylvania, February 1996, [GOOGLE]) teaches a software process improvement (SPI) program model, which can be used to guide development of a long-range, integrated plan for initiating and managing software process improvement programs. The model depicts five phases that provide a continuous loop through the steps necessary for software process improvement. As to claim 51 and 69, McFeeley teaches managing an organization developing a product by managing personnel of the organization to include designing a performance measurement infrastructure. Specifically, McFeeley teaches developing measurable goals that were defined in the Initiating phase as well as defining metrics to monitor progress. McFeeley also teaches managing an organization developing a product by managing personnel of the organization to include the step for executing organization design and development. Specifically, McFeeley teaches Executive management will determine size, scope, and responsibilities of the infrastructure to support the software process improvement program to include determining the number of layers, authority, and responsibility for each component and who should be represented within the infrastructure. McFeeley also teaches managing an organization developing a product by managing personnel of



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the organization to include the step for deploying training. Specifically, McFeeley teaches the Software Engineering Process Group (SEPG) will develop training plans and arrange for training. McFeeley also teaches implementing a product improvement process as needed to include steps for creating, planning, organizing, and maintaining a Software Engineering Process Group (SEPG). Specifically, McFeeley teaches the Management Steering Group (MSG) is responsible for establishing a Software Engineering Process Group (SEPG). The MSG determines SEPG member qualifications, define SEPG roles and responsibilities, define the SEPG relationship to the MSG, develop the SEPG charter, and conducts team building for the SEPG. McFeeley also teaches steps to manage and improve the organization's processes by controlling SEPG project work, rolling out and supporting SEPG projects, completing the SEPG project, and controlling process improvement. Specifically, McFeeley teaches the charter of the SEPG is to be the focal point for process improvement for the organization by keeping abreast of the improvement activities that are underway in the organization. The SEPG supports the line managers and development projects by providing process consultations when required. The MSG is responsible for linking the SPI program to the organization's vision and mission with duties to include providing guidance and corrections to the improvement activities as necessary. McFeeley also teaches managing a project for development of said product. Specifically, McFeeley teaches the Technical Working Group (TWG) to be the solution developers for the SPI program. They are formed to address a specific area in the overall improvement process. In addition, McFeeley teaches where managing the organization, project development, and delivery occur concurrently, and the results of managing the

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organization is used to modify project development and delivery, and the results of project development and delivery are used to modify managing the organization. Specifically, McFeeley teaches the IDEAL model that depicts a circular process of diagnosing, establishing, acting, and leveraging where leveraging feeds back into diagnosing. However, McFeeley and the prior art of record fail to teach or suggest developing said training and managing the delivery of the product by the process steps of analyzing the product, designing the product, building and testing the product to include building and testing the technology infrastructure and an application, and planning and executing product and acceptance tests, and then deploying the product, all occurring after commencement of the prior process step.

The present invention of claim 66 discloses a method for accelerating improvement to a more mature software product. The closest prior art, McFeeley teaches a software process improvement program model, which can be used to guide development of a long-range, integrated plan for initiating and managing software process improvement programs. The model depicts five phases that provide a continuous loop through the steps necessary for software process improvement. As to claim 66, McFeeley teaches managing an organization developing a product, whereby managing of the organization comprises managing personnel of the organization and implementing a product improvement process that are performed in parallel. Also, McFeeley teaches the managing the personnel of the organization comprises designing a performance measurement infrastructure, executing organization design and development after commencement of the performance measure designing, and deploying training after commencement of the executing, and the implementing of a





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product improvement process comprising parallel steps of planning and organizing a Software Engineering Process Group (SEPG) and managing and improving the organization's processes, the managing and improving the organization's processes comprising controlling SEPG project work, rolling out and supporting SEPG projects after commencement of the project work controlling, completing the SEPG project after commencement of the rolling out and supporting, and controlling of process improvement after commencement of the completing. Additionally, McFeeley teaches managing a project for development of the product wherein the project managing includes planning of execution of the project, organizing project resources after commencement of the execution planning, control project work after commencement of the project resources organization, and completion of the project after commencement of the project work controlling. In addition, McFeeley teaches where managing the organization, managing development, and managing delivery is performed concurrently. McFeeley and the prior art of record fail to teach or suggest developing said training and managing the delivery of the product by the process steps of analyzing the product, designing the product, building and testing the product to include building and testing the technology infrastructure and an application, and planning and executing product and acceptance tests, and then deploying the product, all occurring after commencement of the prior process step.

As to Claims 51, 66, and 69, the closest prior art Paulk et al. (Paulk et al., Capability Maturity Model for Software, Version 1.1, Software Engineering Institute, Carnegie Mellon University, Pittsburgh, Pennsylvania, Technical Report, February 1993, copyright 1996) discloses the establishment of the Software Engineering Process Group



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(SEPG) and the controlling, implementing and supporting a of a SEPG project to include organizing project resources. Paulk et al. and the prior art fail to teach or fairly suggest developing said training and the steps for managing delivery of the product by the process steps of analyzing the product, designing the product, building and testing the product to include building and testing the technology infrastructure and an application, and planning and executing product and acceptance tests, and then deploying the product, all occurring after commencement of the prior process step.

Paulk et al. teach how to determine what maturity level an organization is, but fails to teach how to achieve the standards nor how to move from one level to another level. McFeeley teaches a model for process improvement primarily from the standpoint of how the organization is structured to coordinate the activities of the management teams during the deployment of the process improvement process, however, neither Paulk et al. nor McFeeley teach developing the training for the process improvement effort nor do they teach the process steps for developing a product within the process improvement framework.

The closest foreign application pertinent to the applicant's invention is Skoyles-Greenberg et al. (WIPO No. WO 01/25971 A1) that discloses a method for providing an operations maturity model assessment.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Heck whose telephone number is (703) 305-8215. The examiner can normally be reached Monday thru Friday between the hours of 8:00am - 4:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tariq R. Hafiz can be reached on (703) 305-9643. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

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mch  
17 November 2004

  
**TARIQ R. HAFIZ  
SUPERVISORY EXAMINER  
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